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## INSPIRE sustainability internships: Promoting campus greening initiatives through student participation

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#### **Structured Abstract**

**Purpose** - An exploration of the outputs of an internship programme, one of a number of campus-based sustainability activities that have been introduced at the University of Wales, Trinity Saint David, to encourage student-led campus-based greening initiatives.

**Design/methodology/approach** - A Case Study approach was undertaken, allowing the researcher to investigate the programme in its real-life context. The researcher used multiple sources of evidence to gain as holistic a picture as possible.

**Findings** - Interns report positive changes in their behaviours towards sustainability as well as encouraging feedback on their experiential learning, the development of their soft skills, and the creation of new knowledge. Moreover, students communicated perceived benefits for their future careers. The reported outcomes reflect mutually beneficial relationships for student and institution, for example raising the profile of campus greening activities; supporting the University's aim to embed sustainability throughout its campus, community and culture.

**Research limitations/implications** - The researcher recognises the limitations of the research, in particular the small sample size, which has resulted primarily in qualitative results being presented.

**Practical implications** - Feedback from previous interns will be used to shape future internships. In particular, INSPIRE will look for opportunities to work more closely with University operations, departments, faculties and alongside University staff, both academic and support staff.

**Social implications** - Following student feedback, INSPIRE will give students opportunities for wider involvement including an opportunity to propose their own projects in order to shape future internships that meet the needs of student body on campus.

**Originality/value** - Despite being one case study from one institution, the research highlight the value of such programmes for other institutions.

#### Introduction

In this paper the author presents an exploration of the outputs of an internship programme, one of a number of campus-based sustainability activities that have been introduced at the University of Wales, Trinity Saint David, to encourage student-led campus-focussed sustainability initiatives. The internship programme, which has been running for five years, aims to promote campus greening activities and incentivise students to participate in the University's journey to sustainability. The researcher adopted a Case Study approach to investigate the internship programme. This was considered to be the most appropriate tool for exploring the programme as Case Studies are specific, they can be defined spatially, temporally and by their context (Robson and McCartan, 2016). Indeed, it has been demonstrated that individual case studies have a well-founded place in research and they can

yield worthwhile outcomes (Yin, 2014). In this instance, a single Case Study approach allowed the researcher to investigate an existing activity, within its real-life context, using multiple sources of evidence.

Previous research has highlighted the importance of offering opportunities such as internship programmes linked to community service, sustainability and/or justice issues to Higher Education Institution (HEI) students. For example, Clugston and Calder (1999) identity institutional support (including the provision of internships) as one of seven critical dimensions that HEIs must be implementing if they are to consider themselves on the (advanced) path to sustainability. Indeed, there are examples in the literature that suggest student internship programmes can be mutually beneficial relationships for both the student and the placement/project in which they are placed. Examples include fostering student growth, enhancing the relationship between academia and business (e.g. university campus operations); and can challenge academics to include current sustainability issues in their learning and teaching. Undeniably real-world experience is essential to the development of well-prepared graduates and provides students with an opportunity to interact with various levels of personnel (Fiori et al., 2009). Certainly, many researchers writing on developing students' sustainability expertise share the conviction that contextual, constructivist, and collaborative learning approaches involving stakeholders, best support the development of the skills needed to tackle real-world sustainability problems (see Sterling and Thomas. 2006; Rowe, 2007; Segalàs et al., 2011; Wiek et al., 2011). Students benefit from learning through projects like internships, not only specific sustainability challenges, but also from the interpersonal skills (skills to interact with others properly), the 'systems thinking' skills (seeing and talking about reality that help us better understand and work with systems to influence the quality of our lives), and the 'change agent' skills (helping an organisation transform itself) they gain (Rowe, 2007).

Whilst a number of individual case studies on the benefits of problem-based and project-based learning in specific sustainability modules/programmes to both students and institutions have been published (e.g. Brunetti *et al.*, 2003; Brundiers and Wiek, 2013; Wiek *et al.*, 2014), few studies have examined extra-curricular institution-wide initiatives; and in particular few have provided detailed student feedback on the value of such programmes.

#### The Case Study

## University of Wales, Trinity Saint David

The University of Wales, Trinity Saint David (UWTSD) is a new university with an historic past. UWTSD was formed on 18 November 2010 through the merger of the University of Wales Lampeter and Trinity University College Carmarthen, under Lampeter's Royal Charter of 1828. On the 1 August 2013, Swansea Metropolitan University became part of UWTSD and in 2018 it completed its merger with the University of Wales. The 1822 Royal Charter of the University is the oldest in Wales and England after the Universities of Oxford and Cambridge. HRH the Prince of Wales is the University's Royal Patron. The University's main campuses are in Swansea town centre, including a new flagship waterfront campus, as well as in the rural towns of Lampeter and Carmarthen in South West Wales.

UWTSD has a clear national profile in Wales, with many of its staff and students speaking the Welsh language and there are opportunities for students to undertake their studies through the medium of Welsh. Indeed the University's strong presence in South West Wales makes it an important voice in the region. Many students are locals, living and working in the region. They also intend to live and work in the region on completion of their studies, many of them within the public sector. Indeed their contribution to the local region, its economy, environment and culture are readily identifiable (UWTSD, 2015). With the

introduction of Wales' Sustainable Development Law, 'The Well-being of Future Generations (Wales) Act 2015', the well-being of future generations must be central to government decision-making. In other words, public bodies must make sure that when making decisions they take into account the impact they could have on people living their lives in Wales in the future. It expects them to work together better, to involve people reflecting the diversity of Wales' communities, to look to the long term as well as focusing on now, and to take action to try to stop problems getting worse, or even stop them happening in the first place (Welsh Government, 2015). The University therefore has an integral role to play in providing students with the knowledge, skills and capabilities needed to build capacity and importantly resilience for a sustainable future for Wales and its South West region.

### Institute of Sustainable Practice, Innovation and Resource Effectiveness

The Institute of Sustainable Practice, Innovation and Resource Effectiveness (INSPIRE), established in 2012, is a virtual institute which provides a focus for Sustainable Development activities across the University. INSPIRE's role is to work across academic and support structures to deliver on the University's strategic priorities and embed Sustainable Development through its learning, teaching, curricula, campuses, community and culture. Through INSPIRE the University aims to:

- Develop curriculum-related delivery to ensure that students are provided with the knowledge, skills and attitudes that will equip them for their future contribution to the economy, community and environment;
- Develop a research and innovation capacity focused on the core strengths of the University;
- Develop its campuses to the highest standards of environmental performance; and
- Contribute to local communities by giving particular regard to issues of sustainable rural and urban communities and the development of South West Wales as a low carbon region. Since the establishment of INSPIRE, UWTSD has been growing its commitment to

institution-wide sustainability. As part of that commitment, INSPIRE is dedicated to building a community of graduates that are equipped to make a positive contribution to (Welsh) society on leaving the University. An example of this is INSPIRE's internship programme.

#### The Internship Programme

INSPIRE's internship programme, which was set up in the 2013-14 academic year to promote campus greening activities and incentivise students to participate in the University's journey towards sustainability, started as a reward scheme, run in partnership with the Students' Union, for students prepared to make 'One Planet Living' commitments. Initially nine internships positions were created, with three students on each of the University's principle campuses. These students were tasked with working on the following programmes:

- Fair-trade interns: promote Fair-trade and develop the University's commitment to Fair-trade activity, through organising and hosting events and boosting student involvement.
- Green Impact interns: have more of an operational and organisational focus, playing an active role in making the University more sustainable through the delivery of the 'green impact' programme; and
- Sustainability Exchange interns: promote and organise opportunities for staff and students to share ideas, news and views on sustainability issues within the University and the wider community.

The programme, now in its fifth year, provides an opportunity for paid work experience, whilst encouraging students to participate in and support sustainability-related projects as well as the University's wider sustainability ambitions. Staff from INSPIRE and the University's sustainability delivery team (operations) mentor the interns as they develop their sustainability knowledge, skills and passions. Interns are expected to work both

independently and in teams, meeting regularly with INSPIRE/sustainability delivery team staff, a nominated Students' Union representative and each other. All interns are encouraged to be dynamic, creative and to forge links with the student body and relevant external groups and organisations.

Research on the internship programme took place during the 2017-18 academic year. Multiple sources of evidence were used to investigate this Case Study as an existing activity, within its real-life context. This included gaining detailed feedback from the interns on their experiences of the internship programme, what they learnt from completing the internships, their soft skills development and their recommendations for future interns and potential future projects.

## Measuring the value of INSPIRE's internship programme

A number of activities and measures have been put in place to help support as well as determine the value of INSPIRE's internship programme, measuring the significant benefits of the scheme to both the individual student and the University as a whole. Some to the activities and measures described below have been in place since the scheme's inception in 2013-14, for example the monthly activity reports; whilst others have been introduced more recently, such as the soft skills tracker, which was introduced for the Case Study research in 2017-18.

#### Monthly activity report

Students must complete an activity report each month. They also use this report to plan their schedule of works for the coming month(s). They are asked to describe the key activities undertaken during the month including information on how they prepared for it, the number of hours worked (both to prepare for and deliver the activities), and the number of people involved/reached as a direct result of the activities. They are asked to briefly describe what they learnt from the internship that month. They are also asked to summarise their plans for the next month(s) and state any resources they require the following month(s) to fulfil their plans. This helps both the student and INSPIRE/the sustainability delivery team to monitor progress, to identify any issues arising, and specific support that might be needed to progress the internship.

#### Soft skills Tracker

A soft skills tracker was introduced in the 2017-18 academic year. At the end of each month, interns rate their key employability skills via a soft skills tracker. They score themselves on a scale between 1 and 10, where 1 is 'Very Little Understanding' and 10 is 'High Level of Understanding':

- 1. Communication;
- 2. Problem solving:
- 3. Time management;
- 4. Project management;
- 5. Organised;
- 6. Teamwork;
- 7. Computer/IT skills; and
- 8. Leadership.

#### Case Studies

Students are asked to prepare case studies that can be shared through INSPIRE and the University's webpages, including via social media. This supports the dissemination of the interns' work and provides them with published evidence of the contribution they have made to life on campus at the University.

#### Go Green Week

Many of the INSPIRE interns work towards activities for 'Go-Green' Week. Go-Green Week is the People & Planet's annual national week of campus-based action on Climate Change in schools, colleges and universities in the UK. People & Planet are a student-led movement that empowers young people with the skills, confidence and knowledge they need to make change happen, at home and globally (People and Planet, 2018). Go-Green Week brings together a range of activities to UWTSD campus life (and neighbouring community) for one week in February and includes public debates, film screenings, promotion of environmental campaigns, beach clean-ups and much more.

Sustainable Development and the Well-being of Future Generations On-line Certificate In the 2017-18 academic year INSPIRE launched a new on-line certificate on Sustainable Development and the Well-being of Future Generations. During the course of the certificate, participants predominantly learn about Wales' Sustainable Development Law, the 'Well-being of Future Generations (Wales) Act 2015'. The Act defines Sustainable Development as 'the process of improving the economic, social, environmental and cultural well-being of Wales by taking action, in accordance with the Sustainable Development principle, aimed at achieving the Well-being Goals' (Welsh Government, 2015). The certificate takes participants through each of the Sustainable Development or Well-being Goals and looks at why they were established (with a focus on the spirit of the Act, not legislation); and explores and proposes approaches that may move Wales forward towards achieving these Goals. It also looks at how the Welsh Goals relate to the United Nation's Sustainable Development Goals (UN SDGs) (UN, 2018). Participants have an opportunity to consider what the Well-being Goals mean for them, their studies/employment, and their future as Welsh citizens. For participants not physically in Wales or not intending to stay in Wales on completion of their studies, the insight into the UN SDGs provided is pertinent. INSPIRE now asks that all interns (and those wanting to be interns in the future) take part in the certificate in order to deepen their understanding of Sustainable Development and the seven Well-being Goals of the Act.

#### Annual Report

Interns write an annual report on completion of their project, with a focus on recounting their experiences including a demonstration of the knowledge they have gained. As part of this process, they are asked to explain the following:

- What they feel they have gained from their internship;
- What the greatest challenges were and how they worked to overcome them;
- Whether they learnt anything new;
- If they could do something different, what would it be;
- Were they happy with the level of support they received;
- How useful they think the internship was for the future e.g. employment; and
- Whether or not they would recommend the internship programme to others.

## Feedback Questionnaire Survey

In addition, during the 2017-18 academic year an online survey was developed to gain feedback from previous years' interns (before the introduction of more recently introduced reporting requirements). Questions are used to establish why they decided to complete and internship with INSPIRE, what the key deliverables from the internship were, how they think their internship helped with their employability, the hard and soft skills they gained and recommendations for future internships.

#### Sustainability Quiz

Finally, 2017-18 academic year interns were asked to take part in a sustainability quiz at the start of their internships. The quiz, adapted from a questionnaire produced by the Oregon Episcopal School in 2006 was first used by the researcher in 2006 to examine built environment students' understanding of sustainability (Hayles and de la Harpe, 2007; Hayles

et al., 2008). In this instance, it was considered useful as an induction exercise. Students answered 11 questions relating to sustainability. The questions aimed to establish their current perceptions, awareness and knowledge on sustainability issues as follows:

- 1. What is your definition of sustainability?
- 2. How has the concept of sustainability impacted your professional/student life?
- 3. How has the concept of sustainability impacted your personal life?
- 4. What were the primary reasons you chose to complete an internship with INSPIRE?
- 5. What were the primary reasons you chose to follow your current career/student path?
- 6. What people/events/creations have influenced you?
- 7. If you could teach everyone one critical thing about sustainability, what would it be?
- 8. What one single issue stands out as the most critical in terms of managing our natural environment?
- 9. What company/business do you consider a model for sustainability?
- 10. What is the simplest, most easily effected change that we could all do that would reduce our consumption of natural resources?
- 11. If you were dictator of the world, what would you require all of the countries to do immediately to save our environment?

#### **Case Study Results**

Since 2013 INSPIRE has supported 50 internships. These paid internships have given undergraduate students experience running campus-based sustainability initiatives over the course of an academic year. All participating students were encouraged to run their own activities, in their own way, under the supervision of their mentor. Table 1 outlines the cross-section of intern activities undertaken over the five years that the scheme has been running.

INSPIRE Internship	2013-14	2014-15	2015-16	2016-17	2017-18
Energy, Waste & Recycling	3	1	2	2	4
Green Impact <sup>1</sup>	3	3	3	1	
Fairtrade and Sustainable Food	3	2	3	1	3
Events and Campaigns	1			1	3
Blog and Design <sup>2</sup>			1	7	1
Sulitest <sup>3</sup>			1		
Informal Learning Spaces <sup>4</sup>			1		

**Table 1:** INSPIRE Internships between 2013-2018

<sup>&</sup>lt;sup>1</sup> Green Impact is a National Union of Students (NUS) scheme that brings together students and staff to green campuses, curriculums and communities (NUS, 2018). Universities can customise some of the requirements, setting their own targets within the framework.

<sup>&</sup>lt;sup>2</sup> Six students from illustration and animation worked together to produce a ten-minute animation in support of INSPIRE's Well-being of Future Generations Certificate.

<sup>&</sup>lt;sup>3</sup> Sulitest.org (2016) is an international initiative assessing core sustainability literacy with a standardised test. Academic institutions (and non-academic organisations) in more than 50 countries use this tool, which serves as a reference to raise awareness on Sustainable Development and improve sustainability literacy worldwide. This internship supported work of Sultest's UK steering committee in promoting the test.

<sup>&</sup>lt;sup>4</sup> The University has been investing in a new campus and as part of the consultation process this intern looked at how students used informal learning spaces, both indoor and outdoor, on campus and the value they attach to these.

Although the titles of the internships have evolved over time, the principal aims have remained the same, with a focus on: Energy, Waste and Recycling; Green Impact; and Fairtrade and Sustainable Food on campus. More recently internships were introduced that support the promotion and dissemination of sustainability and greening activities on campus through: Events and Campaigns; and Blog and Design. For an example of activities achieved by interns over the course of an academic year, see Table 2.

Table 2: A summary of intern activities (2017-18)

INSPIRE	Activities achieved 2017-18
Internship	
Energy, Waste and Recycling	<ul> <li>Ran two successful Energy Shutdown campaigns across our campuses.</li> <li>Reinstated the allotment project (with the support of the Fairtrade interns). There have already been a number of allotment preparation and planting days.</li> <li>Ran #TheLastStraw campaign.</li> <li>Carried out waste audits of the campuses that looked at recycling provisions and recycling signage.</li> </ul>
Fairtrade & Sustainable Food	<ul> <li>Represented students on the UWTSD Group Fairtrade Steering Group and supported the group with delivering the Fairtrade accreditation programme criteria.</li> <li>Ran a successful Fairtrade Fortnight that included Fairtrade pop events to raise awareness, a craft fair, a Fairtrade food fair, Fairtrade film screenings and a visit from a Fairtrade farmer from Kerala.</li> </ul>
Events &	Ran a number of water-efficiency events on campus.
Campaigns	<ul> <li>Ran a series of upcycling events on campus.</li> </ul>
	<ul> <li>Recruited nine students as Green Impact auditors.</li> </ul>
	<ul> <li>Took part in the new Fairtrade Audit training programme.</li> </ul>
	• Ran a series of events over Go Green Week including litter picks, film screenings and a Harmony <sup>5</sup> panel style event.
Blog & Design	<ul> <li>Supported the INSPIRE Interns and the Sustainability Delivery Team with the design of materials for all events.</li> </ul>
	<ul> <li>Designed a logo for the new UWSTD Energy Shutdown events.</li> </ul>
	Designed a logo for UWTSD Go Green Week.
	<ul> <li>Created an animation for Go Green Week from tealeaves, featured on the TV Screens in reception spaces on campus over the week.</li> </ul>

<sup>&</sup>lt;sup>5</sup> Harmony at UWTSD is defined as an expression of wholeness, a way of looking at ourselves and the world of which we are part. It is about connections and relationships. The emotional, intellectual and physical are all connected. We are connected to our environments, both built and natural; and all the parts of our communities and their environments are connected, too. Harmony asks questions about relationship, justice, fairness and respect in economic, social and political relationships. As an integrative discipline it can be expressed in ideas and practice.

Students are asked to write short case studies on their experience which can be shared via the INSPIRE blog and other social media platforms. Examples of two such case studies are outlined in Table 3.

**Table 3:** Examples of Internship summaries

INSPIRE	Case Study Summary
Internship	
Blog &	The main responsibility of my role is to create visual material to promote the event and
Design	rebranding such as: new logo design for Energy Shut Down Campaign; design poster for the
	campaign; new logo for Go- Green Week; and Go-Green Week and Fairtrade fortnight
•	promotional material. It was a big challenge for me as an illustrator that work with
	traditional media and mainly involve in picture book. What I have learnt in the previous year really helped, I knew how to start working by carried out research in specific area and
	was able to create the outcome and meet deadline. I am extremely pleased with my hand
	drawn and digitally edited image. My confidence grew after working on my first poster
	design and at the same time challenging myself to improve my digital skill. I have also
	explored in typography and composition besides using new digital software. It was a lot
	easier for me when I had to design a new logo for Go Green Week after gaining the
	experience before. I managed to create a 30-second motion graphic for the campaign, which
	aim to raise awareness of the environment and the wellbeing of the future generations. I was
	new to Adobe After Effect, I am happy with this achievement, and that I managed to learn
	new technique and media, which I have difficulties dealing working with. I received a lot of support from my line manager, feedback on my work and guidance on how to complete
	a task. It was a great experience for me to be able to work with other interns and support
	them with my works. It is a valuable experience for me as an illustrator and design working
	on the briefs giving by my manager and other interns. Their feedback and comments enable
	me to improve and become more comfortable and confidant working with a client.
Fairtrade &	Applying for the INSPIRE internship at the beginning of my third year was always a risky
Sustainable	move. For the last two years I'd heard an endless amount of students who had found third
Food	year harder than they had expected, but none the less I was hoping to expand my knowledge of Sustainability at the time and this seemed like a pretty good way to get some experience
	under my belt. After not specifying which internship I was interested in applying for, I was
	assigned with the Fair Trade & Sustainable Food internship – which was brilliant timing
	because my Dissertation tutor had been assigned the perfect dissertation project for me a
	few days prior. My Dissertation topic was based on a new Sustainable food label, assigned
	to me from an organisation called The One Planet Council, who are a government supported
	independent body. So, my dissertation and internship seemed to fall hand in hand with each other, but I had no idea just how much the INSPIRE internship would help me on so many
	different levels. It gave me the chance to practice several skills such as event management,
	time keeping, public speaking and so much more – transferable skills, which will prove to
	be useful, in the future I'm sure. Throughout the length of the internship, my interest in
	Sustainability steadily rose as I found out more and more information regarding the subject,
	thanks to both the internship and my dissertation. Now that the Internship is coming to an
	end, it has inspired me to progress into a Sustainability based career. With this in mind, I
	started applying for online internships with Fair Trade organisations in several different countries, not really expecting anything to come of it – but I was wrong. The World Fair
	Trade Organisation provide Online Communications internships so I applied for it, for the
	experience if nothing else. After a conversation with the representatives at the WFTO, they
	recommended I took a position in their global HQ in Europe!

In addition, three of the measures described above have been examined more closely for the Case Study research project, namely: Sustainability quiz (perceptions and awareness); Soft skills tracker (employability skills); and Final reports.

Sustainability Quiz

The Sustainability Quiz was introduced in the 2017-18 academic year to give interns an opportunity to reflect on their perceptions, awareness and knowledge of sustainability issues before starting their internships<sup>6</sup>. The results of this initial quiz are compared with the recorded development of their soft skills and feedback from their final reports, to evaluate any benefits derived from undertaking the internship. An analysis of distinct issues, themes or concepts was undertaken by extracting keywords from responses to each question posed in the sustainability quiz. This was used to help interpret, compare and summarise the interns' responses. A summary of the results can be found in Table 4.

**Table 4:** A summary of distinct issues, themes and concepts from the sustainability quiz

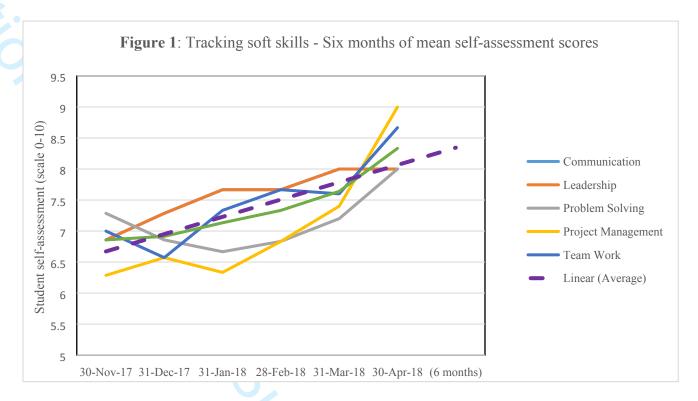
Topic		Distinct issues, themes and concepts
1 Definition of sustainability What is your definition of sustainability?		<ul> <li>Guaranteeing resources for future generations;</li> <li>Avoiding resource depletion / destruction – not making things worse;</li> <li>Balancing environmental, economic and social concerns;</li> <li>Being aware of human and environmental interactions including consciousness of own impact on the (natural) environment; and</li> <li>Saving the world.</li> </ul>
2	Impact of sustainability on student/work life? How has the concept of sustainability impacted your professional/student life?	<ul> <li>Make more informed [purchasing] choices</li> <li>Thinking before acting</li> <li>Travel choices e.g. driving a car less/use public transport more</li> <li>Reduced resource consumption e.g. paper, paint, food, energy, water</li> <li>Curriculum led to new interest/passion</li> <li>Awareness of the University's impact on the surrounding area/waste created.</li> </ul>
3	Impact of sustainability on personal life? How has the concept of sustainability impacted your personal life?	<ul> <li>Spiritual response / global consciousness</li> <li>Make more informed purchasing choices e.g. food, recycled/repurposed clothes, second hand books, eco-refill packs</li> <li>Travel choices e.g. driving a car less</li> <li>Greater awareness of [unsustainable] choices we make as a family</li> <li>As a parent I want to leave the world a better place for my children and my children's children</li> <li>More conscious of impact of littering and biodiversity reduction</li> </ul>
4	Internship? What were the primary reasons you chose to complete an internship with INSPIRE?	<ul> <li>An interest in sustainability/Fairtrade/environmentalism</li> <li>Professional, transferable skills and knowledge</li> <li>To meet like-minded people</li> <li>To engage the student population/ wider audience and share [the sustainability] message effectively</li> </ul>
5	Career path? What were the primary reasons you chose to follow your current career/student path?	<ul> <li>To help people/make a difference</li> <li>Love of education/art/environment/share a love of the environment through art</li> <li>Enjoy working with children and want to have a positive influence on the next generations</li> <li>To share larger messages with the world</li> </ul>
6	Influencers	<ul> <li>Wanting to make a difference</li> <li>A love of animals /nature programmes/wildlife charities</li> </ul>

<sup>&</sup>lt;sup>6</sup> The intention is to run the quiz again at the end of their internships so that they can see how their answers have changed and potentially increased in complexity / sophistication (after Biggs, 1995) following time spent focusing on sustainability issues.

20	What people/events/creations have influenced you?	<ul> <li>Lecturers/tutors/staff other people [from 'ordinary' people (friends, cleaners in halls) to celebrity influencers (David Attenborough, Brian Cox)]</li> <li>Ted talks / Earth Day / Fair trade fortnight</li> <li>Politics</li> <li>Early experiences e.g. scouts.</li> </ul>
7	Critical Issue If you could teach everyone one critical thing about sustainability, what would it be?	<ul> <li>Nothing lasts forever</li> <li>Sustainability is attainable/doesn't have to be more expensive than status quo</li> <li>Think before you buy</li> <li>Recycle, recycle, recycle</li> <li>It's never too late to change / every small [change] makes a difference</li> </ul>
8	Environmental Preservation What one single issue stands out as the most critical in terms of managing our natural environment?	<ul> <li>Reducing consumption (meat, fossil fuels, plastics, waste to landfill)</li> <li>Reducing forest depletion</li> <li>Raising awareness of technology/science that can support sustainable living</li> </ul>
9	Model Business What company/business do you consider a model for sustainability?	<ul> <li>UWTSD</li> <li>Centre for Alternative Technology (CAT)</li> <li>Ecosia</li> <li>Rhino Ark Foundation</li> <li>Marks and Spencer</li> </ul>
10	Changing Behaviour What is the simplest, most easily effected change that we could all do that would reduce our consumption of natural resources?	<ul> <li>Recycling</li> <li>Walking / using public transport in preference to driving</li> <li>Energy and water conservation</li> <li>Ethical purchasing including buying local (products and groceries)</li> </ul>
11	Immediate Action If you were dictator of the world, what would you require all of the countries to do immediately to save our environment?	<ul> <li>Phase out fossil fuels in favour of renewables/environmentally friendly sources</li> <li>Car-free days / cities</li> <li>Ban plastics / ensure everything that is manufactured is reusable</li> <li>Invest in education</li> </ul>

#### Soft Skills Tracker

Much of the learning shared by the interns through their final (as well as monthly) reports reflects on the soft skills they have gained from taking part in the internship programme. From this academic year, for the purposes of the Case Study, students have been asked to rate their key enterprise and employability skills via a soft skills tracker. Figure 1 provides an overview of the results of the interns' self-tracking of soft skills over a six-month period (November 2017- April 2018). Interns only provided complete data for five of the eight soft skills, as a result 'Time Management'; 'Organised'; and 'Computer/IT Skills' are omitted from the graph.



#### **Internship Final Reports**

In addition to providing a report of their activities during the course of their internships, the interns' final reports has been used to interpret what they have learnt from the projects they have been involved in and in particular, the knowledge they have gained along the way.

When asked to describe what skills and new knowledge they have gained from their internship experience, students described new knowledge, practical application and research skills, for example:

"I am more confident with my digital skills e.g. creating artwork using AdobeInDesign and After Effect" (Blog and Design internship);

"I learnt to work remotely and communicate mainly through dropbox and email" (Green Impact intern);

"I feel I grew as a designer and improved my ability to understand design briefs (Blog and Design internship);

"Skills in auditing" (Energy, Waste & Recycling and Green Impact internships); and

"Questionnaire design" (Energy, Waste & Recycling internship).

More than one intern highlighted time management as their greatest challenge, juggling the expectations of the internship with their university studies. Other challenges included persuading external organisations to take part in university campus-based green events such as Fairtrade fortnight. Energy, Waste & Recycling interns described inertia from other students as a major challenge, for example:

"Student engagement has been slow" (Energy, Waste & Recycling internship);

"Engaging students in activities was by far the biggest challenge" (Energy, Waste & Recycling internship).

When asked to pinpoint exactly what they will take away from the internship, students described how much their knowledge and understanding of sustainability had increased during the internship:

"I learnt a lot about sustainability" (Blog and Design intern); and

"Taking the Sultest, Well-being of Future Generations Certificate and volunteering for Green Impact increased my knowledge of sustainability" (Blog and Design intern).

Whilst other students referred to the experiential learning:

"Learning how the University recycles was fascinating" (Energy, Waste & Recycling internship);

"I learnt that the majority of students aren't as engaged in sustainability as they should be. However I also learnt that there are a number of fantastic staff and student that go the extra mile, which is inspiring" (Energy, Waste & Recycling internship); and

"I learnt to let people help me!" (Energy, Waste & Recycling internship).

When asked what they would have done differently given the opportunity to undertake an internship again, students referred to behaviours they would change:

"I would make more of an effort to attend events, taking more photos for the Blog and social media" (Blog and Design intern);

"Plan my time better" (Energy, Waste & Recycling internship);

"Not let personal events affect my performance" (Fairtrade and Sustainable Food internship); and

"Concentrate my time and efforts on more productive events (Energy, Waste & Recycling internship).

Students also provided thoughts on how the internships could be run differently:

"Could add an [element of] office-based work experience" (Green Impact internship);

"Opportunity to shadow my mentor to gain a better understanding of what is being done and where [INSPIRE/Sustainability Team] are based" (Green Impact internship);

"Student driven projects" (Energy, Waste & Recycling internship); and

"Continuity over more than one year for longer projects" (Energy, Waste & Recycling internship).

The level of support given to students was considered appropriate and sufficient by all students. Monthly meetings and regular email exchanges proved effective and adequate in support of the delivery of internship activities. The most recent cohort of students particularly liked the monthly reporting with built in feedback loops, work planner and skills

tracker, brought in for the 2017-18 academic year. When asked how they thought their internship experience would support them for life beyond the University, students gave both practical and altruistic responses:

"Has already helped with a recent [job] interview because the company was conscious of sustainability and had a preference for design for charities and non-profits" (Blog and Design internship);

"It's already been put to good use, I hope to use my experience to bring change to my new role in the Students' Union" (Energy, Waste & Recycling internship);

"When I wrote my CV as I [was able to] write down my experience and provide examples of work I have created" (Blog and Design internship);

"Made me realise how important it is to promote sustainable living" (Fairtrade and Sustainable Food internship);

"I plan to base my future career around sustainability" (Fairtrade and Sustainable Food internship);

"Awareness of adapting simple tasks / action to reduce impact [on the environment]" (Green Impact internship); and

"Ignited a passion for researching and exploring ecological issues and working closely with organisations, which adhere to making the environment less polluted and more geared towards more understanding between humans, animals and the environment" (Energy, Waste & Recycling internship).

Finally, students were asked whether they would recommend the internship programme to other students. Every single response was positive, see below for some examples of the feedback received by INSPIRE:

"A really good experience for those doing graphic design or web work. It is great to be paid for what you are doing and [you] can feel good about doing it for a good cause" (Blog and Design internship);

"I loved my time with INSPIRE [and I would] absolutely recommend it" (Energy, Waste & Recycling internship);

"Definitely I have told students to keep an eye out for future internships" (Fairtrade and Sustainable Food internship);

"I have already recommended it to many students because it [provides] invaluable work experience" (Green Impact internship);

"I would, and have already, recommended this experience to other students. I feel that it is valuable activity which can help our University promote and grow its sustainable purpose" (Energy, Waste & Recycling internship);

"This is my second year as an [INSPIRE] intern and I would without doubt recommend that other students put themselves forward" (Energy, Waste & Recycling internship); and

"This is a positive for life after university, to prepare for the world of employment" (Energy, Waste & Recycling internship).

#### Discussion

As reported above, participating students describe a number of benefits to taking part in INSPIRE's internship programme. These benefits have for the purposes of this research been categorised and summarised as: knowledge acquisition; behaviour change; skills development; and career progression. In addition, substantial reported outputs represent significant and important advances for the University, as it strives for more sustainable campus environs. Indeed, many of the perceived advantages of the programme support the earlier aforementioned research of Sterling and Thomas (2006); Rowe (2007); and Fiori *et al.* (2009), who propose that student sustainability programmes should be collaborative learning environments, involving stakeholders and real-world experiences (Sterling and Thomas, 2006; Fiori *et al.*, 2009); and consider this the optimum approach for fostering student 'growth' and consequent development of their interpersonal, systems thinking and change agent skills (Rowe, 2007).

#### Knowledge acquisition

The sustainability quiz captured students' aspirations for the internship as well as gaining valuable insight into their knowledge, perceptions and awareness of sustainability. When asked about their primary reasons were for completing the internship, a desire to gain professional, transferrable skills and knowledge was highlighted. The interns were able to pinpoint new knowledge and skills gained from the internships and identified tangible knowledge and skills such as digital skills, skills in auditing and questionnaire design, in their final reports.

## Behaviour change

A focus on sustainability appears to impact/influence the interns' decision-making and they reported that they are inclined to take more time to think before acting. Some of these reported behaviours were not as a direct result of the internship programme, however the internship experience may have an impact/focus the mind. From trying to reduce resource consumption to making more informed choices with respect to food, recycled/repurposed clothes, second hand books, eco-refill packs, alongside making informed travel choices; the students report behaviours both at home and at the University that reflect sustainable decision-making and a desire to make a difference.

## Experiential learning

Students have been able to observe and experience greening activities on campus including continuing improvements in campus waste minimisation and new recycling targets. For others, their experiential learning focussed on people. This included both experiencing the positive impact engaged staff (and students) can have on driving change for sustainability, but also finding that student engagement was, for them, the biggest challenge. This highlighted the importance of the internship programme in promoting sustainability and greening activities on campus amongst the student body.

#### Development of soft skills

The soft skills tracker (Figure 1) corroborates feedback reported in the interns' monthly and final reports in reference to the interns' perceived positive development of their enterprise and employability skills. Over the six months that they tracked themselves, students reported an overarching improvement across five of the eight skills tracked (communication, leadership, problem solving, project management and teamwork). They provided incomplete data for three other skills (time management, organised and computer/IT skills) and as a result, it was not possible to map their progress. One student reported that they wished they had planned their time better. Overall, the students found it useful to think

about the value of transferrable skills and consider whether they were improving/need help with them, over the course of the internship. In the future, students may benefit from a greater focus on and support developing their soft skills as an integral part of the internship training programme, rather than as a bi-product of the internship. After all, when asked why they wanted to take part in the internship programme, gaining professional, transferrable skills was a motivating factor.

## Career progression

At the beginning of their internships, students expressed a desire to work in careers where they could help people and share the wider sustainability message through their jobs. By the end of their internships, students were able to identify and communicate with greater complexity, how they could use their experiences to meet these overarching aims. For example, some students could see how a deeper understanding of sustainability might now influence their future career choices, e.g. planning to base a future career around sustainability. Whilst others could already identify real-life impacts, such as strengthening their Curriculum Vitae, being a focus of discussions at job interviews, and even being successful in securing relevant work, e.g. two students now employed by the UWTSD Students' Union are already using their internship experiences to bring about transformative change.

#### Feedback for INSPIRE

All students reported the level of support given by INSPIRE and the sustainability delivery team as appropriate and satisfactory. However students did also suggest that they might have liked to be physically based in one of the University operations/estate departments and use 'embedding' opportunities to better understand the workings of the department/wider institution. Students were also keen to develop their own internship programmes and extend their internships over more than one academic year. This feedback has been passed on to INSPIRE and sustainability delivery team members for consideration going forward to the 2018-19 academic year.

#### Limitations of the study

The researcher recognises the limitations of the research; in particular, the small sample size, which has resulted primarily in qualitative results being presented. The researcher used multiple sources of evidence to gain as holistic a picture as possible; but due to the sample size the study presented, the results are principally descriptive in nature. A longitudinal study is planned for the future, in order to collect multiple data sets for a more rigorous investigation.

#### **Conclusions**

In this paper the author presents an exploration of the outputs of an internship programme, one of a number of campus-based sustainability activities that have been introduced at UWTSD to encourage student-led campus-based greening initiatives. A Case Study approach was undertaken, allowing the researcher to investigate the programme in its real-life context during the 2017-18 academic year.

INSPIRE interns' feedback on their experiences of taking part in the programme are constructive. Interns report positive changes in their behaviours towards sustainability as well as encouraging feedback on their experiential learning, the development of their soft skills, and the creation of new knowledge. In addition, they communicated perceived benefits for their future careers, with a number of students having already used the experience as a springboard to starting out on their chosen career paths. Moreover, the internship programme has raised the profile of campus greening activities, supporting the University's aim to embed sustainability throughout its campus, community and culture (in addition to and

complimenting its learning, teaching and curriculum embedding activities). Indeed, reported outcomes from UWTSD's internship programme reflect the mutually beneficial relationships for student and institution as described by researchers such as Fiori *et al.* (2009) and Rowe (2007).

This study was designed to add value to the existing internship programme, with results fed back into the rolling programme; both to the students who took part in the study as well as staff engaged in designing and facilitating the internship programme. The intention being to add value to the programme through the encouragement of best practice and continuous improvement.

#### Way forward

Consequently, feedback from previous interns will be used to shape future internships at UWTSD. In particular, for the next academic year, INSPIRE will look for opportunities to work more closely with University operations/departments/faculties and alongside University staff (both academic and support staff). INSPIRE will also consider lengthening internship timeframes, extending them beyond the traditionally used academic year, where requested by the intern and required for the project. There will also be a call for project proposals from undergraduate students in order to shape future internships that meet the needs of the student body on campus in support of campus greening activities. Finally, it is intended that the data collected during the 2017-18 academic year will continue to be collected annually. This, alongside best practice published by others, will be used to inspire continuous improvement internally as well as to share experiences through the publication and promotion of the work of UWTSD and INSPIRE externally.

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#### References

- Biggs, J. (1995). "Assessing for learning: Some dimensions underlying new". Alberta Journal of Educational Research, 41, 1, 1-17.
- Brunetti, A. J., Petrell, R. J. and Sawada, B. (2003). "SEEDing sustainability: Team project-based learning enhances awareness of sustainability at the University of British Columbia, Canada". International Journal of Sustainability in Higher Education, 4, 3, 210-217.
- Brundiers, K. and Wiek, A. (2013). "Do We Teach What We Preach? An International Comparison of Problem- and Project-Based Learning Courses in Sustainability.". Sustainability, 5, 4, 1725-1746.
- Clugston, R. M. and Calder, W. (1999). "Critical Dimensions of Sustainability in Higher Education". In W. L. Filho (Ed.), Sustainability and University Life, 31-46. New York: Peter Lang.
- Fiori, C. M. and Pearce, A. R. (2009). "Improving the Internship Experience: Creating a Win-Win for Students, Industry and Faculty". Proceedings of the 2009 ASCE Construction Research Congress, Seattle, WA, April 4 7, 2009.
- Hayles, C. S. and de la Harpe, B. (2007). "A Study of Student Perceptions and Awareness of Sustainability Issues". Proceedings of the 3<sup>rd</sup> annual Built Environment Education Annual Conference (BEECON), the University of Westminster, London, 12 13 September 2007.

Hayles, C. S., de la Harpe, B. and Lombardo, R. (2008) "Are we changing students' perceptions of sustainability?" CIB W89: International Conference in Building Education and Research, Kandalama, Sri Lanka 10th - 15th February 2008.

National Union of Students (2018). "Green Impact". Available online at: https://sustainability.nus.org.uk/green-impact/about (Last accessed 15/08/18).

People and Planet (2018). "Go-Green Week". Available online at: https://peopleandplanet.org/events (Last accessed 15/08/18).

- Robson, C. and McCartan, K. (2016). "Real World Research". 4th ed. Chichester: Wiley.
- Rowe, D. (2007). "Education for a sustainable future". Science, 317, 5836, 323–324. doi:10.1126/science.1143552
- Segalàs, J., Esbrí, M.E. and Benson, M.P. (2011). "European project semester: 30 ECTS of PBL in sustainability with multicultural and multidisciplinary bachelor students groups". In Proceedings of International Conference in Engineering Education Engineering Sustainability for a Global Economy, Belfast, UK, 21–26 August 2011, 1–9.
- Sterling, S. and Thomas, I. (2006). "Education for sustainability: The role of capabilities in guiding university curricula". International Journal of Sustainability in Higher Education, 1, 4, 349–370.
- Sulitest (2016). "Building a Sustainable Future Together". Available online at: Sulitest.org/ (Last accessed 15/08/18).
- United Nations (2018). "Sustainable Development Goals". Available online at: http://www.un.org/sustainabledevelopment/sustainable-development-goals/ (Last accessed 15/08/18).
- UWTSD (2015). "About University of Wales: Trinity Saint David". Available online at: http://www.uwtsd.ac.uk/about/ (Last accessed 15/08/18).
- Wiek, A.; Withycombe, L.; Redman, C.L. and Banas Mills, S. (2011). "Moving forward on competence in sustainability research and problem-solving". Environment: Science and Policy for Sustainable Development, 53, 2, 3–13. doi:10.1080/00139157.2011.554496
- Wiek, A., Xiong, A., Brundiers, K. and van der Leeuw, S. (2014). "Integrating problemand project-based learning into sustainability programs: A case study on the School of Sustainability at Arizona State University". International Journal of Sustainability in Higher Education, 15, 4, 431-449.
- Welsh Government (2015). "Future Generations Bill". Available online at: http://gov.wales/topics/people-and-communities/people/future-generations-bill/?lang=en (Last accessed 15/08/18).
- Yin, R. K. (2014). "Case Study Research: Design and Methods". 5th ed. Los Angeles: Sage.

## **Biographical Note**

Dr Carolyn S. Hayles has more than 20 years' experience working as an academic and consultant; undertaking design, consultancy, lecturing and research in the disciplines of architecture, interior design, construction delivery and management. Carolyn's expertise is in green building, biophilic and sustainable design and construction including climate change resilience and amelioration, with a particular research interest in the delivery of sustainable decision-making processes and frameworks. At the time this research was conducted, Carolyn was the Academic Lead for the Institute of Sustainable Practice, Innovation and Resource Effectiveness (INSPIRE) at the University of Wales, Trinity Saint David (UWTSD), where she had a remit to undertake research on and support the delivery of Education for Sustainable Development and Global Citizenship (ESDGC) across all

s. Caroly Design, Carc. disciplines. Carolyn is currently a Senior Lecturer in Interior Design at the Cardiff School of

**Table 1:** INSPIRE Internships between 2013-2018

INSPIRE Internship	2013-14	2014-15	2015-16	2016-17	2017-18
Energy, Waste & Recycling	3	1	2	2	4
Green Impact <sup>1</sup>	3	3	3	1	
Fairtrade and Sustainable Food	3	2	3	1	3
Events and Campaigns	1			1	3
Blog and Design <sup>2</sup>			1	7	1
Sulitest <sup>3</sup>			1		
Informal Learning Spaces <sup>4</sup>			1		

<sup>&</sup>lt;sup>1</sup> Green Impact is a National Union of Students (NUS) scheme that brings together students and staff to green campuses, curriculums and communities (NUS, 2018). Universities can customise some of the requirements, setting their own targets within the framework.

<sup>&</sup>lt;sup>2</sup> Six students from illustration and animation worked together to produce a ten-minute animation in support of INSPIRE's Well-being of Future Generations Certificate.

<sup>&</sup>lt;sup>3</sup> Sulitest.org (2016) is an international initiative assessing core sustainability literacy with a standardised test. Academic institutions (and non-academic organisations) in more than 50 countries use this tool, which serves as a reference to raise awareness on Sustainable Development and improve sustainability literacy worldwide. This internship supported work of Sultest's UK steering committee in promoting the test.

<sup>&</sup>lt;sup>4</sup> The University has been investing in a new campus and as part of the consultation process this intern looked at how students used informal learning spaces, both indoor and outdoor, on campus and the value they attach to these.

**Table 2**: A summary of intern activities (2017-18)

INSPIRE	Activities achieved 2017-18
Internship	Activities acineved 2017-10
Energy, Waste and Recycling	<ul> <li>Ran two successful Energy Shutdown campaigns across our campuses.</li> <li>Reinstated the allotment project (with the support of the Fairtrade interns). There have already been a number of allotment preparation</li> </ul>
Q	<ul> <li>and planting days.</li> <li>Ran #TheLastStraw campaign.</li> <li>Carried out waste audits of the campuses that looked at recycling provisions and recycling signage.</li> </ul>
Fairtrade & Sustainable Food	<ul> <li>Represented students on the UWTSD Group Fairtrade Steering Group and supported the group with delivering the Fairtrade accreditation programme criteria.</li> <li>Ran a successful Fairtrade Fortnight that included Fairtrade pop events to raise awareness, a craft fair, a Fairtrade food fair, Fairtrade film screenings and a visit from a Fairtrade farmer from Kerala.</li> </ul>
Events & Campaigns	<ul> <li>Ran a number of water-efficiency events on campus.</li> <li>Ran a series of upcycling events on campus.</li> <li>Recruited nine students as Green Impact auditors.</li> <li>Took part in the new Fairtrade Audit training programme.</li> <li>Ran a series of events over Go Green Week including litter picks, film screenings and a Harmony¹ panel style event.</li> </ul>
Blog & Design	<ul> <li>Supported the INSPIRE Interns and the Sustainability Delivery Team with the design of materials for all events.</li> <li>Designed a logo for the new UWSTD Energy Shutdown events.</li> <li>Designed a logo for UWTSD Go Green Week.</li> <li>Created an animation for Go Green Week from tealeaves, featured on the TV Screens in reception spaces on campus over the week.</li> </ul>

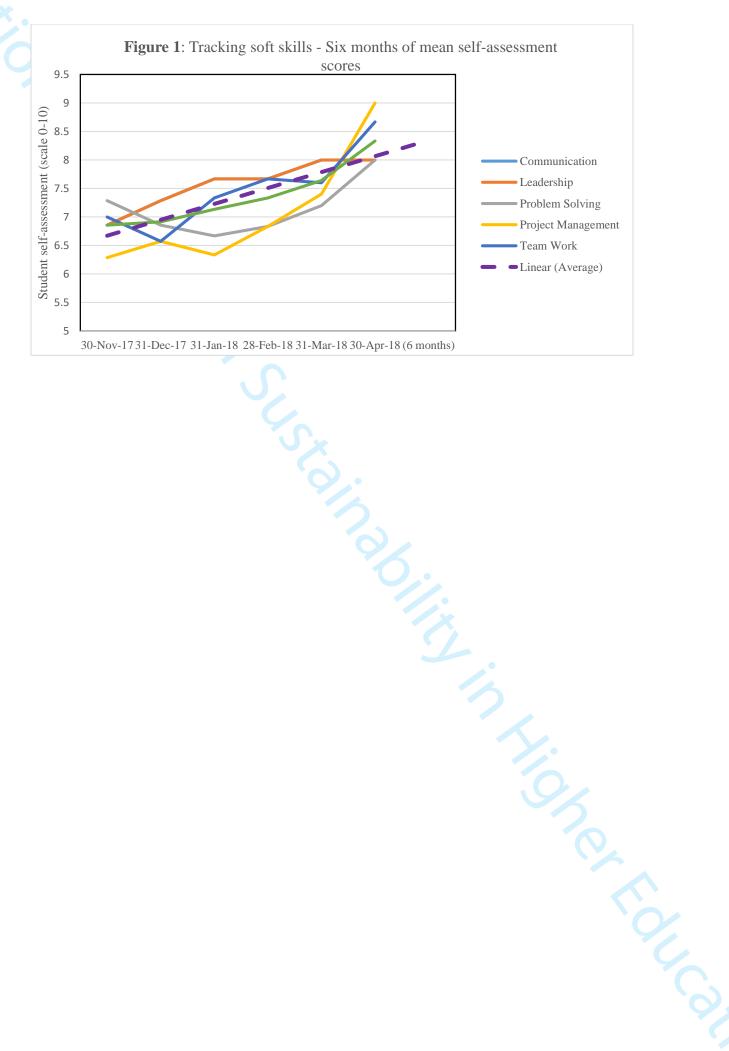
<sup>&</sup>lt;sup>1</sup> Harmony at UWTSD is defined as an expression of wholeness, a way of looking at ourselves and the world of which we are part. It is about connections and relationships. The emotional, intellectual and physical are all connected. We are connected to our environments, both built and natural; and all the parts of our communities and their environments are connected, too. Harmony asks questions about relationship, justice, fairness and respect in economic, social and political relationships. As an integrative discipline it can be expressed in ideas and practice.

**Table 3:** Examples of Internship summaries

INSPIRE	Case Study Summary	
Internship	Cube beauty building	
Blog & Design	The main responsibility of my role is to create visual material to promote the event and rebranding such as: new logo design for Energy Shut Down Campaign; design poster for the campaign; new logo for Go- Green Week; and Go-Green Week and Fairtrade fortnight promotional material. It was a big challenge for me as an illustrator that work with traditional media and mainly involve in picture book. What I have learnt in the previous year really helped, I knew how to start working by carried out research in specific area and was able to create the outcome and meet deadline. I am extremely pleased with my hand	
	drawn and digitally edited image. My confidence grew after working on my first poster design and at the same time challenging myself to improve my digital skill. I have also explored in typography and composition besides using new digital software. It was a lot easier for me when I had to design a new logo for Go Green Week after gaining the experience before. I managed to create a 30-second motion graphic for the campaign, which aim to raise awareness of the environment and the wellbeing of the future generations. I was new to Adobe After Effect, I am happy with this achievement, and that I managed to learn new technique and media, which I have difficulties dealing working with. I received a lot of support from my line manager, feedback on my work and guidance on how to complete a task. It was a great experience for me to be able to work with other interns and support them with my works. It is a valuable experience for me as an illustrator and design working on the briefs giving by my manager and other interns. Their feedback and comments enable me to improve and become more comfortable and confidant working with a client.	
Fairtrade & Sustainable Food	Applying for the INSPIRE internship at the beginning of my third year was always a risky move. For the last two years I'd heard an endless amount of students who had found third year harder than they had expected, but none the less I was hoping to expand my knowledge of Sustainability at the time and this seemed like a pretty good way to get some experience under my belt. After not specifying which internship I was interested in applying for, I was	
	assigned with the Fair Trade & Sustainable Food internship – which was brilliant timing because my Dissertation tutor had been assigned the perfect dissertation project for me a few days prior. My Dissertation topic was based on a new Sustainable food label, assigned to me from an organisation called The One Planet Council, who are a government supported independent body. So, my dissertation and internship seemed to fall hand in hand with each other, but I had no idea just how much the INSPIRE internship would help me on so many different levels. It gave me the chance to practice several skills such as event management, time keeping, public speaking and so much more – transferable skills, which will prove to be useful, in the future I'm sure. Throughout the length of the internship, my interest in Sustainability steadily rose as I found out more and more information regarding the subject, thanks to both the internship and my dissertation. Now that the Internship is coming to an end, it has inspired me to progress into a Sustainability based career. With this in mind, I started applying for online internships with Fair Trade organisations in several different countries, not really expecting anything to come of it – but I was wrong. The World Fair Trade Organisation provide Online Communications internships so I applied for it, for the experience if nothing else. After a conversation with the representatives at the WFTO, they recommended I took a position in their global HQ in Europe!	

	Торіс	Distinct issues, themes and concepts
	Definition of sustainability What is your definition of sustainability?	<ul> <li>Guaranteeing resources for future generations;</li> <li>Avoiding resource depletion / destruction – not making things worse;</li> <li>Balancing environmental, economic and social concerns;</li> <li>Being aware of human and environmental interactions including consciousness of own impact on the (natural) environment; and</li> <li>Saving the world.</li> </ul>
2	Impact of sustainability on student/work life? How has the concept of sustainability impacted your professional/student life?	<ul> <li>Make more informed [purchasing] choices</li> <li>Thinking before acting</li> <li>Travel choices e.g. driving a car less/use public transport more</li> <li>Reduced resource consumption e.g. paper, paint, food, energy, water</li> <li>Curriculum led to new interest/passion</li> <li>Awareness of the University's impact on the surrounding area/waste created.</li> </ul>
3	Impact of sustainability on personal life? How has the concept of sustainability impacted your personal life?	<ul> <li>Spiritual response / global consciousness</li> <li>Make more informed purchasing choices e.g. food, recycled/repurposed clothes, second hand books, eco-refill packs</li> <li>Travel choices e.g. driving a car less</li> <li>Greater awareness of [unsustainable] choices we make as a family</li> <li>As a parent I want to leave the world a better place for my children and my children's children</li> <li>More conscious of impact of littering and biodiversity reduction</li> </ul>
4	Internship? What were the primary reasons you chose to complete an internship with INSPIRE?	<ul> <li>An interest in sustainability/Fairtrade/environmentalism</li> <li>Professional, transferable skills and knowledge</li> <li>To meet like-minded people</li> <li>To engage the student population/ wider audience and share [the sustainability] message effectively</li> </ul>
5	Career path? What were the primary reasons you chose to follow your current career/student path?	<ul> <li>To help people/make a difference</li> <li>Love of education/art/environment/share a love of the environment through art</li> <li>Enjoy working with children and want to have a positive influence on the next generations</li> <li>To share larger messages with the world</li> </ul>
6	Influencers What people/events/creations have influenced you?	<ul> <li>Wanting to make a difference</li> <li>A love of animals /nature programmes/wildlife charities</li> <li>Lecturers/tutors/staff other people [from 'ordinary' people (friends, cleaners in halls) to celebrity influencers (David Attenborough, Brian Cox)]</li> <li>Ted talks / Earth Day / Fair trade fortnight</li> <li>Politics</li> <li>Early experiences e.g. scouts.</li> </ul>
7	Critical Issue If you could teach everyone one critical thing about sustainability, what would it be?	<ul> <li>Nothing lasts forever</li> <li>Sustainability is attainable/doesn't have to be more expensive than status quo</li> <li>Think before you buy</li> <li>Recycle, recycle, recycle</li> <li>It's never too late to change / every small [change] makes a difference</li> </ul>

8	Environmental	Reducing consumption (meat, fossil fuels, plastics, waste to landfill)
0	Preservation	Reducing consumption (meat, rossil ruers, plastics, waste to failum)     Reducing forest depletion
	What one single issue stands	Reducing forest depiction     Raising awareness of technology/science that can support
	out as the most critical in terms	sustainable living
	of managing our natural	sustamable fiving
9	environment?  Model Business	• UWTSD
	What company/business do you	Centre for Alternative Technology (CAT)
	consider a model for	Centre for Atternative Technology (CAT)     Ecosia
	sustainability?	Rhino Ark Foundation
		Marks and Spencer
10	Changing Behaviour	Recycling
10	What is the simplest, most	Walking / using public transport in preference to driving
	easily effected change that we	Walking / using public transport in preference to driving     Energy and water conservation
	could all do that would reduce	Ethical purchasing including buying local (products and groceries)
	our consumption of natural resources?	Ethical purchasing including buying local (products and groceries)
11	Immediate Action	Phase out fossil fuels in favour of renewables/environmentally
	If you were dictator of the	friendly sources
	world, what would you require	Car-free days / cities
	all of the countries to do immediately to save our	Ban plastics / ensure everything that is manufactured is reusable
	environment?	Invest in education
		U <sub>A</sub>



## INSPIRE sustainability internships: Promoting campus greening initiatives through student participation

#### Introduction

In this paper the author presents an exploration of the outputs of an internship programme, one of a number of campus-based sustainability activities that have been introduced at the University of Wales, Trinity Saint David, to encourage student-led campus-focussed sustainability initiatives. The internship programme, which has been running for five years, aims to promote campus greening activities and incentivise students to participate in the University's journey to sustainability. The researcher adopted a Case Study approach to investigate the internship programme. This was considered to be the most appropriate tool for exploring the programme as Case Studies are specific, they can be defined spatially, temporally and by their context (Robson and McCartan, 2016). Indeed, it has been demonstrated that individual case studies have a well-founded place in research and they can yield worthwhile outcomes (Yin, 2014). In this instance, a single Case Study approach allowed the researcher to investigate an existing activity, within its real-life context, using multiple sources of evidence.

Previous research has highlighted the importance of offering opportunities such as internship programmes linked to community service, sustainability and/or justice issues to Higher Education Institution (HEI) students. For example, Clugston and Calder (1999) identity institutional support (including the provision of internships) as one of seven critical dimensions that HEIs must be implementing if they are to consider themselves on the (advanced) path to sustainability. Indeed, there are examples in the literature that suggest student internship programmes can be mutually beneficial relationships for both the student and the placement/project in which they are placed. Examples include fostering student growth, enhancing the relationship between academia and business (e.g. university campus operations); and can challenge academics to include current sustainability issues in their learning and teaching. Undeniably real-world experience is essential to the development of well-prepared graduates and provides students with an opportunity to interact with various levels of personnel (Fiori et al., 2009). Certainly, many researchers writing on developing students' sustainability expertise share the conviction that contextual, constructivist, and collaborative learning approaches involving stakeholders, best support the development of the skills needed to tackle real-world sustainability problems (see Sterling and Thomas, 2006; Rowe, 2007; Segalàs et al., 2011; Wiek et al., 2011). Students benefit from learning through projects like internships, not only specific sustainability challenges, but also from the interpersonal skills (skills to interact with others properly), the 'systems thinking' skills (seeing and talking about reality that help us better understand and work with systems to influence the quality of our lives), and the 'change agent' skills (helping an organisation transform itself) they gain (Rowe, 2007).

Whilst a number of individual case studies on the benefits of problem-based and project-based learning in specific sustainability modules/programmes to both students and institutions have been published (e.g. Brunetti *et al.*, 2003; Brundiers and Wiek, 2013; Wiek *et al.*, 2014), few studies have examined extra-curricular institution-wide initiatives; and in particular few have provided detailed student feedback on the value of such programmes.

The Case Study University of Wales, Trinity Saint David

The University of Wales, Trinity Saint David (UWTSD) is a new university with an historic past. UWTSD was formed on 18 November 2010 through the merger of the University of Wales Lampeter and Trinity University College Carmarthen, under Lampeter's Royal Charter of 1828. On the 1 August 2013, Swansea Metropolitan University became part of UWTSD and in 2018 it completed its merger with the University of Wales. The 1822 Royal Charter of the University is the oldest in Wales and England after the Universities of Oxford and Cambridge. HRH the Prince of Wales is the University's Royal Patron. The University's main campuses are in Swansea town centre, including a new flagship waterfront campus, as well as in the rural towns of Lampeter and Carmarthen in South West Wales.

UWTSD has a clear national profile in Wales, with many of its staff and students speaking the Welsh language and there are opportunities for students to undertake their studies through the medium of Welsh. Indeed the University's strong presence in South West Wales makes it an important voice in the region. Many students are locals, living and working in the region. They also intend to live and work in the region on completion of their studies, many of them within the public sector. Indeed their contribution to the local region, its economy, environment and culture are readily identifiable (UWTSD, 2015). With the introduction of Wales' Sustainable Development Law, 'The Well-being of Future Generations (Wales) Act 2015', the well-being of future generations must be central to government decision-making. In other words, public bodies must make sure that when making decisions they take into account the impact they could have on people living their lives in Wales in the future. It expects them to work together better, to involve people reflecting the diversity of Wales' communities, to look to the long term as well as focusing on now, and to take action to try to stop problems getting worse, or even stop them happening in the first place (Welsh Government, 2015). The University therefore has an integral role to play in providing students with the knowledge, skills and capabilities needed to build capacity and importantly resilience for a sustainable future for Wales and its South West region.

#### Institute of Sustainable Practice, Innovation and Resource Effectiveness

The Institute of Sustainable Practice, Innovation and Resource Effectiveness (INSPIRE), established in 2012, is a virtual institute which provides a focus for Sustainable Development activities across the University. INSPIRE's role is to work across academic and support structures to deliver on the University's strategic priorities and embed Sustainable Development through its learning, teaching, curricula, campuses, community and culture. Through INSPIRE the University aims to:

- Develop curriculum-related delivery to ensure that students are provided with the knowledge, skills and attitudes that will equip them for their future contribution to the economy, community and environment;
- Develop a research and innovation capacity focused on the core strengths of the University;
- Develop its campuses to the highest standards of environmental performance; and
- Contribute to local communities by giving particular regard to issues of sustainable rural and urban communities and the development of South West Wales as a low carbon region. Since the establishment of INSPIRE, UWTSD has been growing its commitment to

Since the establishment of INSPIRE, UWTSD has been growing its commitment to institution-wide sustainability. As part of that commitment, INSPIRE is dedicated to building a community of graduates that are equipped to make a positive contribution to (Welsh) society on leaving the University. An example of this is INSPIRE's internship programme.

#### The Internship Programme

INSPIRE's internship programme, which was set up in the 2013-14 academic year to promote campus greening activities and incentivise students to participate in the University's journey towards sustainability, started as a reward scheme, run in partnership with the

Students' Union, for students prepared to make 'One Planet Living' commitments. Initially nine internships positions were created, with three students on each of the University's principle campuses. These students were tasked with working on the following programmes:

- Fair-trade interns: promote Fair-trade and develop the University's commitment to Fair-trade activity, through organising and hosting events and boosting student involvement.
- *Green Impact interns*: have more of an operational and organisational focus, playing an active role in making the University more sustainable through the delivery of the 'green impact' programme; and
- Sustainability Exchange interns: promote and organise opportunities for staff and students to share ideas, news and views on sustainability issues within the University and the wider community.

The programme, now in its fifth year, provides an opportunity for paid work experience, whilst encouraging students to participate in and support sustainability-related projects as well as the University's wider sustainability ambitions. Staff from INSPIRE and the University's sustainability delivery team (operations) mentor the interns as they develop their sustainability knowledge, skills and passions. Interns are expected to work both independently and in teams, meeting regularly with INSPIRE/sustainability delivery team staff, a nominated Students' Union representative and each other. All interns are encouraged to be dynamic, creative and to forge links with the student body and relevant external groups and organisations.

Research on the internship programme took place during the 2017-18 academic year. Multiple sources of evidence were used to investigate this Case Study as an existing activity, within its real-life context. This included gaining detailed feedback from the interns on their experiences of the internship programme, what they learnt from completing the internships, their soft skills development and their recommendations for future interns and potential future projects.

#### Measuring the value of INSPIRE's internship programme

A number of activities and measures have been put in place to help support as well as determine the value of INSPIRE's internship programme, measuring the significant benefits of the scheme to both the individual student and the University as a whole. Some to the activities and measures described below have been in place since the scheme's inception in 2013-14, for example the monthly activity reports; whilst others have been introduced more recently, such as the soft skills tracker, which was introduced for the Case Study research in 2017-18.

#### Monthly activity report

Students must complete an activity report each month. They also use this report to plan their schedule of works for the coming month(s). They are asked to describe the key activities undertaken during the month including information on how they prepared for it, the number of hours worked (both to prepare for and deliver the activities), and the number of people involved/reached as a direct result of the activities. They are asked to briefly describe what they learnt from the internship that month. They are also asked to summarise their plans for the next month(s) and state any resources they require the following month(s) to fulfil their plans. This helps both the student and INSPIRE/the sustainability delivery team to monitor progress, to identify any issues arising, and specific support that might be needed to progress the internship.

### Soft skills Tracker

A soft skills tracker was introduced in the 2017-18 academic year. At the end of each month, interns rate their key employability skills via a soft skills tracker. They score themselves on a scale between 1 and 10, where 1 is 'Very Little Understanding' and 10 is 'High Level of Understanding':

- 1. Communication;
- 2. Problem solving;
- 3. Time management;
- 4. Project management;
- 5. Organised;
- 6. Teamwork;
- 7. Computer/IT skills; and
- 8. Leadership.

#### Case Studies

Students are asked to prepare case studies that can be shared through INSPIRE and the University's webpages, including via social media. This supports the dissemination of the interns' work and provides them with published evidence of the contribution they have made to life on campus at the University.

#### Go Green Week

Many of the INSPIRE interns work towards activities for 'Go-Green' Week. Go-Green Week is the People & Planet's annual national week of campus-based action on Climate Change in schools, colleges and universities in the UK. People & Planet are a student-led movement that empowers young people with the skills, confidence and knowledge they need to make change happen, at home and globally (People and Planet, 2018). Go-Green Week brings together a range of activities to UWTSD campus life (and neighbouring community) for one week in February and includes public debates, film screenings, promotion of environmental campaigns, beach clean-ups and much more.

Sustainable Development and the Well-being of Future Generations On-line Certificate

In the 2017-18 academic year INSPIRE launched a new on-line certificate on Sustainable Development and the Well-being of Future Generations. During the course of the certificate, participants predominantly learn about Wales' Sustainable Development Law, the 'Well-being of Future Generations (Wales) Act 2015'. The Act defines Sustainable Development as 'the process of improving the economic, social, environmental and cultural well-being of Wales by taking action, in accordance with the Sustainable Development principle, aimed at achieving the Well-being Goals' (Welsh Government, 2015). The certificate takes participants through each of the Sustainable Development or Well-being Goals and looks at why they were established (with a focus on the spirit of the Act, not legislation); and explores and proposes approaches that may move Wales forward towards achieving these Goals. It also looks at how the Welsh Goals relate to the United Nation's Sustainable Development Goals (UN, 2018). Participants have an opportunity to consider what the Well-being Goals mean for them, their studies/employment, and their future as Welsh citizens. For participants not physically in Wales or not intending to stay in Wales on completion of their studies, the insight into the UN SDGs provided is pertinent. INSPIRE now asks that all interns (and those wanting to be interns in the future) take part in the certificate in order to deepen their understanding of Sustainable Development and the seven Well-being Goals of the Act.

#### Annual Report

Interns write an annual report on completion of their project, with a focus on recounting their experiences including a demonstration of the knowledge they have gained. As part of this process, they are asked to explain the following:

- What they feel they have gained from their internship;
- What the greatest challenges were and how they worked to overcome them;
- Whether they learnt anything new;
- If they could do something different, what would it be;
- Were they happy with the level of support they received;

- How useful they think the internship was for the future e.g. employment; and
- Whether or not they would recommend the internship programme to others.

## Feedback Questionnaire Survey

In addition, during the 2017-18 academic year an online survey was developed to gain feedback from previous years' interns (before the introduction of more recently introduced reporting requirements). Questions are used to establish why they decided to complete and internship with INSPIRE, what the key deliverables from the internship were, how they think their internship helped with their employability, the hard and soft skills they gained and recommendations for future internships.

#### Sustainability Quiz

Finally, 2017-18 academic year interns were asked to take part in a sustainability quiz at the start of their internships. The quiz, adapted from a questionnaire produced by the Oregon Episcopal School in 2006 was first used by the researcher in 2006 to examine built environment students' understanding of sustainability (Hayles and de la Harpe, 2007; Hayles *et al.*, 2008). In this instance, it was considered useful as an induction exercise. Students answered 11 questions relating to sustainability. The questions aimed to establish their current perceptions, awareness and knowledge on sustainability issues as follows:

- 1. What is your definition of sustainability?
- 2. How has the concept of sustainability impacted your professional/student life?
- 3. How has the concept of sustainability impacted your personal life?
- 4. What were the primary reasons you chose to complete an internship with INSPIRE?
- 5. What were the primary reasons you chose to follow your current career/student path?
- 6. What people/events/creations have influenced you?
- 7. If you could teach everyone one critical thing about sustainability, what would it be?
- 8. What one single issue stands out as the most critical in terms of managing our natural environment?
- 9. What company/business do you consider a model for sustainability?
- 10. What is the simplest, most easily effected change that we could all do that would reduce our consumption of natural resources?
- 11. If you were dictator of the world, what would you require all of the countries to do immediately to save our environment?

#### **Case Study Results**

Since 2013 INSPIRE has supported 50 internships. These paid internships have given undergraduate students experience running campus-based sustainability initiatives over the course of an academic year. All participating students were encouraged to run their own activities, in their own way, under the supervision of their mentor. Table 1 outlines the cross-section of intern activities undertaken over the five years that the scheme has been running.

Although the titles of the internships have evolved over time, the principal aims have remained the same, with a focus on: Energy, Waste and Recycling; Green Impact; and Fairtrade and Sustainable Food on campus. More recently internships were introduced that support the promotion and dissemination of sustainability and greening activities on campus through: Events and Campaigns; and Blog and Design. For an example of activities achieved by interns over the course of an academic year, see Table 2.

Students are asked to write short case studies on their experience which can be shared via the INSPIRE blog and other social media platforms. Examples of two such case studies are outlined in Table 3.

In addition, three of the measures described above have been examined more closely for the Case Study research project, namely: Sustainability quiz (perceptions and awareness); Soft skills tracker (employability skills); and Final reports.

#### Sustainability Quiz

The Sustainability Quiz was introduced in the 2017-18 academic year to give interns an opportunity to reflect on their perceptions, awareness and knowledge of sustainability issues before starting their internships<sup>1</sup>. The results of this initial quiz are compared with the recorded development of their soft skills and feedback from their final reports, to evaluate any benefits derived from undertaking the internship. An analysis of distinct issues, themes or concepts was undertaken by extracting keywords from responses to each question posed in the sustainability quiz. This was used to help interpret, compare and summarise the interns' responses. A summary of the results can be found in Table 4.

### Soft Skills Tracker

Much of the learning shared by the interns through their final (as well as monthly) reports reflects on the soft skills they have gained from taking part in the internship programme. From this academic year, for the purposes of the Case Study, students have been asked to rate their key enterprise and employability skills via a soft skills tracker. Figure 1 provides an overview of the results of the interns' self-tracking of soft skills over a six-month period (November 2017- April 2018). Interns only provided complete data for five of the eight soft skills, as a result 'Time Management'; 'Organised'; and 'Computer/IT Skills' are omitted from the graph.

## Internship Final Reports

In addition to providing a report of their activities during the course of their internships, the interns' final reports has been used to interpret what they have learnt from the projects they have been involved in and in particular, the knowledge they have gained along the way.

When asked to describe what skills and new knowledge they have gained from their internship experience, students described new knowledge, practical application and research skills, for example:

- "I am more confident with my digital skills e.g. creating artwork using AdobeInDesign and After Effect" (Blog and Design internship);
- "I learnt to work remotely and communicate mainly through dropbox and email" (Green Impact intern);
- "I feel I grew as a designer and improved my ability to understand design briefs (Blog and Design internship);
- "Skills in auditing" (Energy, Waste & Recycling and Green Impact internships); and
- "Questionnaire design" (Energy, Waste & Recycling internship).

More than one intern highlighted time management as their greatest challenge, juggling the expectations of the internship with their university studies. Other challenges included persuading external organisations to take part in university campus-based green events such

<sup>&</sup>lt;sup>1</sup> The intention is to run the quiz again at the end of their internships so that they can see how their answers have changed and potentially increased in complexity / sophistication (after Biggs, 1995) following time spent focusing on sustainability issues.

as Fairtrade fortnight. Energy, Waste & Recycling interns described inertia from other students as a major challenge, for example:

"Student engagement has been slow" (Energy, Waste & Recycling internship);

"Engaging students in activities was by far the biggest challenge" (Energy, Waste & Recycling internship).

When asked to pinpoint exactly what they will take away from the internship, students described how much their knowledge and understanding of sustainability had increased during the internship:

"I learnt a lot about sustainability" (Blog and Design intern); and

"Taking the Sultest, Well-being of Future Generations Certificate and volunteering for Green Impact increased my knowledge of sustainability" (Blog and Design intern).

Whilst other students referred to the experiential learning:

"Learning how the University recycles was fascinating" (Energy, Waste & Recycling internship);

"I learnt that the majority of students aren't as engaged in sustainability as they should be. However I also learnt that there are a number of fantastic staff and student that go the extra mile, which is inspiring" (Energy, Waste & Recycling internship); and

"I learnt to let people help me!" (Energy, Waste & Recycling internship).

When asked what they would have done differently given the opportunity to undertake an internship again, students referred to behaviours they would change:

"I would make more of an effort to attend events, taking more photos for the Blog and social media" (Blog and Design intern);

"Plan my time better" (Energy, Waste & Recycling internship);

"Not let personal events affect my performance" (Fairtrade and Sustainable Food internship); and

"Concentrate my time and efforts on more productive events (Energy, Waste & Recycling internship).

Students also provided thoughts on how the internships could be run differently:

"Could add an [element of] office-based work experience" (Green Impact internship);

"Opportunity to shadow my mentor to gain a better understanding of what is being done and where [INSPIRE/Sustainability Team] are based" (Green Impact internship);

"Student driven projects" (Energy, Waste & Recycling internship); and

"Continuity over more than one year for longer projects" (Energy, Waste & Recycling internship).

The level of support given to students was considered appropriate and sufficient by all students. Monthly meetings and regular email exchanges proved effective and adequate in support of the delivery of internship activities. The most recent cohort of students particularly liked the monthly reporting with built in feedback loops, work planner and skills tracker, brought in for the 2017-18 academic year. When asked how they thought their internship experience would support them for life beyond the University, students gave both practical and altruistic responses:

"Has already helped with a recent [job] interview because the company was conscious of sustainability and had a preference for design for charities and non-profits" (Blog and Design internship);

"It's already been put to good use, I hope to use my experience to bring change to my new role in the Students' Union" (Energy, Waste & Recycling internship);

"When I wrote my CV as I [was able to] write down my experience and provide examples of work I have created" (Blog and Design internship);

"Made me realise how important it is to promote sustainable living" (Fairtrade and Sustainable Food internship);

"I plan to base my future career around sustainability" (Fairtrade and Sustainable Food internship);

"Awareness of adapting simple tasks / action to reduce impact [on the environment]" (Green Impact internship); and

"Ignited a passion for researching and exploring ecological issues and working closely with organisations, which adhere to making the environment less polluted and more geared towards more understanding between humans, animals and the environment" (Energy, Waste & Recycling internship).

Finally, students were asked whether they would recommend the internship programme to other students. Every single response was positive, see below for some examples of the feedback received by INSPIRE:

"A really good experience for those doing graphic design or web work. It is great to be paid for what you are doing and [you] can feel good about doing it for a good cause" (Blog and Design internship);

"I loved my time with INSPIRE [and I would] absolutely recommend it" (Energy, Waste & Recycling internship);

"Definitely I have told students to keep an eye out for future internships" (Fairtrade and Sustainable Food internship);

"I have already recommended it to many students because it [provides] invaluable work experience" (Green Impact internship);

"I would, and have already, recommended this experience to other students. I feel that it is valuable activity which can help our University promote and grow its sustainable purpose" (Energy, Waste & Recycling internship);

"This is my second year as an [INSPIRE] intern and I would without doubt recommend that other students put themselves forward" (Energy, Waste & Recycling internship); and

"This is a positive for life after university, to prepare for the world of employment" (Energy, Waste & Recycling internship).

#### **Discussion**

As reported above, participating students describe a number of benefits to taking part in INSPIRE's internship programme. These benefits have for the purposes of this research been categorised and summarised as: knowledge acquisition; behaviour change; skills development; and career progression. In addition, substantial reported outputs represent significant and important advances for the University, as it strives for more sustainable campus environs. Indeed, many of the perceived advantages of the programme support the earlier aforementioned research of Sterling and Thomas (2006); Rowe (2007); and Fiori *et al.* (2009), who propose that student sustainability programmes should be collaborative learning environments, involving stakeholders and real-world experiences (Sterling and Thomas, 2006; Fiori *et al.*, 2009); and consider this the optimum approach for fostering student 'growth' and consequent development of their interpersonal, systems thinking and change agent skills (Rowe, 2007).

#### Knowledge acquisition

The sustainability quiz captured students' aspirations for the internship as well as gaining valuable insight into their knowledge, perceptions and awareness of sustainability. When asked about their primary reasons were for completing the internship, a desire to gain professional, transferrable skills and knowledge was highlighted. The interns were able to pinpoint new knowledge and skills gained from the internships and identified tangible knowledge and skills such as digital skills, skills in auditing and questionnaire design, in their final reports.

#### Behaviour change

A focus on sustainability appears to impact/influence the interns' decision-making and they reported that they are inclined to take more time to think before acting. Some of these reported behaviours were not as a direct result of the internship programme, however the internship experience may have an impact/focus the mind. From trying to reduce resource consumption to making more informed choices with respect to food, recycled/repurposed clothes, second hand books, eco-refill packs, alongside making informed travel choices; the students report behaviours both at home and at the University that reflect sustainable decision-making and a desire to make a difference.

#### Experiential learning

Students have been able to observe and experience greening activities on campus including continuing improvements in campus waste minimisation and new recycling targets. For others, their experiential learning focussed on people. This included both experiencing the positive impact engaged staff (and students) can have on driving change for sustainability, but also finding that student engagement was, for them, the biggest challenge. This highlighted the importance of the internship programme in promoting sustainability and greening activities on campus amongst the student body.

## Development of soft skills

The soft skills tracker (Figure 1) corroborates feedback reported in the interns' monthly and final reports in reference to the interns' perceived positive development of their enterprise and employability skills. Over the six months that they tracked themselves, students reported an overarching improvement across five of the eight skills tracked (communication, leadership, problem solving, project management and teamwork). They

provided incomplete data for three other skills (time management, organised and computer/IT skills) and as a result, it was not possible to map their progress. One student reported that they wished they had planned their time better. Overall, the students found it useful to think about the value of transferrable skills and consider whether they were improving/need help with them, over the course of the internship. In the future, students may benefit from a greater focus on and support developing their soft skills as an integral part of the internship training programme, rather than as a bi-product of the internship. After all, when asked why they wanted to take part in the internship programme, gaining professional, transferrable skills was a motivating factor.

## Career progression

At the beginning of their internships, students expressed a desire to work in careers where they could help people and share the wider sustainability message through their jobs. By the end of their internships, students were able to identify and communicate with greater complexity, how they could use their experiences to meet these overarching aims. For example, some students could see how a deeper understanding of sustainability might now influence their future career choices, e.g. planning to base a future career around sustainability. Whilst others could already identify real-life impacts, such as strengthening their Curriculum Vitae, being a focus of discussions at job interviews, and even being successful in securing relevant work, e.g. two students now employed by the UWTSD Students' Union are already using their internship experiences to bring about transformative change.

## Feedback for INSPIRE

All students reported the level of support given by INSPIRE and the sustainability delivery team as appropriate and satisfactory. However students did also suggest that they might have liked to be physically based in one of the University operations/estate departments and use 'embedding' opportunities to better understand the workings of the department/wider institution. Students were also keen to develop their own internship programmes and extend their internships over more than one academic year. This feedback has been passed on to INSPIRE and sustainability delivery team members for consideration going forward to the 2018-19 academic year.

#### **Conclusions**

In this paper the author presents an exploration of the outputs of an internship programme, one of a number of campus-based sustainability activities that have been introduced at UWTSD to encourage student-led campus-based greening initiatives. A Case Study approach was undertaken, allowing the researcher to investigate the programme in its real-life context during the 2017-18 academic year. The researcher used multiple sources of evidence to gain as holistic a picture as possible. However the researcher recognises the limitations of the research, in particular the small sample size, which has resulted primarily in qualitative results being presented.

INSPIRE interns' feedback on their experiences of taking part in the programme are constructive. Interns report positive changes in their behaviours towards sustainability as well as encouraging feedback on their experiential learning, the development of their soft skills, and the creation of new knowledge. In addition they communicated perceived benefits for their future careers, with a number of students having already used the experience as a springboard to starting out on their chosen career paths. Moreover, the internship programme has raised the profile of campus greening activities, supporting the University's aim to embed sustainability throughout its campus, community and culture (in addition to and complimenting its learning, teaching and curriculum embedding activities). Indeed, reported outcomes from UWTSD's internship programme reflect the mutually beneficial relationships

for student and institution as described by researchers such as Fiori *et al.* (2009) and Rowe (2007).

Feedback from previous interns will be used to shape future internships. In particular for the next academic year, INSPIRE will look for opportunities to work more closely with University operations/departments/faculties and alongside University staff (both academic and support staff). INSPIRE will also consider lengthening internship timeframes, extending them beyond the traditionally used academic year, where requested by the intern and required for the project. There will also be a call for project proposals from undergraduate students in order to shape future internships that meet the needs of student body on campus, in the support of campus greening activities. Finally, it is intended that the data collected during the 2017-18 academic year for this research project will continue to be collected annually, in order to conduct a longitudinal study in the future.

#### References

- Biggs, J. (1995). "Assessing for learning: Some dimensions underlying new". Alberta Journal of Educational Research, 41, 1, 1-17.
- Brunetti, A. J., Petrell, R. J. and Sawada, B. (2003). "SEEDing sustainability: Team project-based learning enhances awareness of sustainability at the University of British Columbia, Canada". International Journal of Sustainability in Higher Education, 4, 3, 210-217.
- Brundiers, K. and Wiek, A. (2013). "Do We Teach What We Preach? An International Comparison of Problem- and Project-Based Learning Courses in Sustainability". Sustainability, 5, 4, 1725-1746.
- Clugston, R. M. and Calder, W. (1999). "Critical Dimensions of Sustainability in Higher Education". In W. L. Filho (Ed.), Sustainability and University Life, 31-46. New York: Peter Lang.
- Fiori, C. M. and Pearce, A. R. (2009). "Improving the Internship Experience: Creating a Win-Win for Students, Industry and Faculty". Proceedings of the 2009 ASCE Construction Research Congress, Seattle, WA, April 4 7, 2009.
- Hayles, C. S. & de la Harpe, B. (2007). "A Study of Student Perceptions and Awareness of Sustainability Issues". Proceedings of the 3<sup>rd</sup> annual Built Environment Education Annual Conference (BEECON), the University of Westminster, London, 12 13 September 2007.
- Hayles, C. S., de la Harpe, B. and Lombardo, R. (2008) "Are we changing students' perceptions of sustainability?" CIB W89: International Conference in Building Education and Research, Kandalama, Sri Lanka 10th 15th February 2008.
- National Union of Students (2018). "Green Impact". Available online at: https://sustainability.nus.org.uk/green-impact/about (Last accessed 15/08/18).
- People and Planet (2018). "Go-Green Week". Available online at: https://peopleandplanet.org/events (Last accessed 15/08/18).
- Robson, C. and McCartan, K. (2016). "Real World Research". 4th ed. Chichester: Wiley.
- Rowe, D. (2007). "Education for a sustainable future". Science, 317, 5836, 323–324. doi:10.1126/science.1143552
- Segalàs, J.; Esbrí, M.E. and Benson, M.P. (2011). "European project semester: 30 ECTS of PBL in sustainability with multicultural and multidisciplinary bachelor students groups". In Proceedings of International Conference in Engineering Education Engineering Sustainability for a Global Economy, Belfast, UK, 21–26 August 2011, 1–9.

- Sterling, S. and Thomas, I. (2006). "Education for sustainability: The role of capabilities in guiding university curricula". International Journal of Sustainability in Higher Education, 1, 4, 349–370.
- Sulitest (2016). "Building a Sustainable Future Together". Available online at: Sulitest.org/ (Last accessed 15/08/18).
- United Nations (2018). "Sustainable Development Goals". Available online at: http://www.un.org/sustainabledevelopment/sustainable-development-goals/ (Last accessed 15/08/18).
- UWTSD (2015). "About University of Wales: Trinity Saint David". Available online at: http://www.uwtsd.ac.uk/about/ (Last accessed 15/08/18).
- Wiek, A.; Withycombe, L.; Redman, C.L. and Banas Mills, S. (2011). "Moving forward on competence in sustainability research and problem-solving". Environment: Science and Policy for Sustainable Development, 53, 2, 3–13. doi:10.1080/00139157.2011.554496
- Wiek, A., Xiong, A., Brundiers, K. and van der Leeuw, S. (2014). "Integrating problemand project-based learning into sustainability programs: A case study on the School of Sustainability at Arizona State University". International Journal of Sustainability in Higher Education, 15, 4, 431-449.
- nmunitie, 8).
  Design and Me, Welsh Government (2015). "Future Generations Bill". Available online at: http://gov.wales/topics/people-and-communities/people/future-generationsbill/?lang=en (Last accessed 15/08/18).
- Yin, R. K. (2014). "Case Study Research: Design and Methods". 5th ed. Los Angeles: Sage.